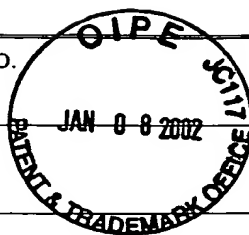


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U.S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRAN- SLATION IF APPRO- PRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

KS	1	Poole, "Oxygen Reactions with Bacterial Oxidases and Globins: Binding, Reduction and Regulation," <u>Antonie van Leeuwenhoek</u> 65:289-310 (1994)
KS	2	Membrillo-Hernandez et al., "Bacterial Flavohaemoglobins: A Consensus Sequence and Identification of a Discrete Enterobacterial Group and of Further Bacterial Globins," <u>FEMS Microbiology Letters</u> 155:179-184 (1997)
KS	3	Hou et al., "Myoglobin-Like Aerotaxis Transducers in Archaea and Bacteria," <u>Nature</u> 403:540-544 (2000)
KS	4	EMBL Accession No. P71413, "Transducer HTB Protein," 01-FEB-1997, XP-002171025
KS	5	EMBL Accession No. 007621, "Hypothetical 48.8KDA Protein," 01-JUL-1997, XP-002171026
EXAMINER		DATE CONSIDERED
		1-28-03
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

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	APPLICANT Alam et al.	
	FILING DATE December 6, 1999	GROUP ART UNIT 1646

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE

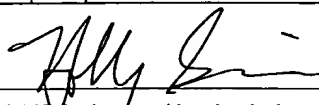
FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRAN- SLATION IF APPRO- PRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

AS	1	Boyd et al., "Structure of the Serine Chemoreceptor in <i>Escherichia coli</i> ," <u>Nature</u> 301:623-626 (1983)
AS	2	Bashford et al., "Determinants of a Protein Fold. Unique Features of the Globin Amino Acid Sequences," <u>J. Mol. Biol.</u> 196: 199-216 (1987)
AS	3	Studier et al., "Use of T7 RNA Polymerase to Direct Expression of Cloned Genes," <u>Methods in Enzymology</u> 185:60-89 (1990)
AS	4	Ihara et al., "The ATP Synthase of <i>Halobacterium salinarum</i> (<i>halobium</i>) is an Archaeobacterial Type as Revealed from the Amino Acid Sequences of its Two Major Subunits," <u>Archives of Biochemistry and Biophysics</u> 286(1):111-116 (1991)
AS	5	Alam et al., "Structural Features of Methyl-Accepting Taxis Proteins Conserved Between Archaeobacteria and Eubacteria Revealed by Antigenic Cross-Reaction," <u>Journal of Bacteriology</u> 173(18):5837-5842 (1991)
AS	6	Gilles-Gonzalez et al., "A Haemoprotein with Kinase Activity Encoded by the Oxygen Sensor of <i>Rhizobium meliloti</i> ," <u>Nature</u> 350:170-172 (1991)
AS	7	Hazelbauer, "Bacterial Chemoreceptors," <u>Current Opinion in Structural Biology</u> 2:505-510 (1992)
AS	8	Vinogradov et al., "Adventitious Variability? The Amino Acid Sequences of Nonvertebrate Globins," <u>Comp. Biochem. Physiol.</u> 106B(1):1-26 (1993)
AS	9	Lois et al., "The Oxygen Sensor FixL of <i>Rizobium meliloti</i> is a Membrane Protein Containing Four Possible Transmembrane Segments," <u>Journal of Bacteriology</u> 175(4):1103-1109 (1993)

EXAMINER



DATE CONSIDERED

1-28-03

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6 9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANS- LATION IF APPRO- PRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

HS	10	Springer et al., "Mechanisms of Ligand Recognition in Myoglobin," <u>Chem. Rev.</u> 94:699-714 (1994)
HS	11	Gilles-Gonzalez et al., "Heme-Based Sensors, Exemplified by the Kinase FixL, Are a New Class of Heme Protein with Distinctive Ligand Binding and Autoxidation," <u>Biochemistry</u> 33:8067-8073 (1994)
HS	12	Kapp, Alignment of 700 Globin Sequences: Extent of Amino Acid Substitution and its Correlation with Variation in Volume," <u>Protein Science</u> 4:2179-2190 (1995)
HS	13	Wong et al., "Role of Methylation in Aerotaxis in <i>Bacillus subtilis</i> ," <u>Journal of Bacteriology</u> 177(14):3985-3991 (1995)
HS	14	Lindbeck et al., "Aerotaxis in <i>Halobacterium salinarium</i> is Methylation-Dependent," <u>Microbiology</u> 141:2945-2953 (1995)
HS	15	Hill et al., "Azotobacter vinelandii NIFL is a Flavoprotein that Modulates Transcriptional Activation of Nitrogen-Fixation Genes via a Redox-Sensitive Switch," <u>Proc. Natl. Acad. Sci. USA</u> 93:2143-2148 (1996)
HS	16	Zhang et al., "Signal Transduction in the Archaeon <i>Halobacterium salinarium</i> is Processed Through Three Subfamilies of 13 Soluble and Membrane-Bound Transducer Proteins," <u>Proc. Natl. Acad. Sci. USA</u> 93:4649-4654 (1996)
HS	17	Bibikov et al., "A Signal Transducer for Aerotaxis in <i>Escherichia coli</i> ," <u>Journal of Bacteriology</u> 179(12):4075-4079 (1997)
HS	18	Rebbapragada et al., "The Aer Protein and the Serine Chemoreceptor Tsr Independently Sense Intracellular Energy Levels and Transduce Oxygen, Redox, and Energy Signals for <i>Escherichia coli</i> Behavior," <u>Proc. Natl. Acad. Sci. USA</u> 94:10541-10546 (1997)

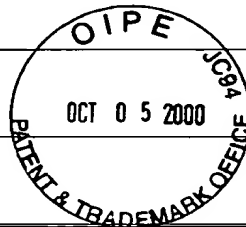
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	APPLICANT	
	Alam et al.	
	FILING DATE	GROUP ART UNIT
	December 6, 1999	1646



U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANS- LATION IF APPRO- PRIATE

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

HS	19	Kunst et al., "The Complete Genome Sequence of the Gram-Positive Bacterium <i>Bacillus subtilis</i> ," <u>Nature</u> 390:249-256 (1997)
HS	20	Vagner et al., "A Vector for Systematic Gene Inactivation in <i>Bacillus subtilis</i> ," <u>Microbiology</u> 144:3097-3104 (1998)
HS	21	Zhulin et al., "Correlation of PAS Domains with Electron Transport-Associated Proteins in Completely Sequenced Microbial Genomes," <u>Molecular Microbiology</u> 29:1522-1523 (1998)
HS	22	Brooun et al., "An Archaeal Aerotaxis Transducer Combines Subunit I Core Structures of Eukaryotic Cytochrome c Oxidase and Eubacterial Methyl-Accepting Chemotaxis Proteins," <u>Journal of Bacteriology</u> 180(7):1642-1646 (1998)
HS	23	Larsen et al., "Spectroscopic Characterization of Two Soluble Transducers from the Archaeon <i>Halobacterium salinarum</i> ," <u>Journal of Protein Chemistry</u> 18(3):269-275 (1999)
HS	24	Gong et al., "Structure of a Biological Oxygen Sensor: A New Mechanism for Heme-Driven Signal Transduction," <u>Proc. Natl. Acad. Sci. USA</u> 95:15177-15182 (1998)
HS	25	Hardison, "Hemoglobins from Bacteria to Man: Evolution of Different Patterns of Gene Expression," <u>The Journal of Experimental Biology</u> 201:1099-1117 (1998)
HS	26	Hardison, "The Evolution of Hemoglobin," <u>American Scientist</u> 87:126-137 (1999)
HS	27	Taylor et al., "Aerotaxis and Other Energy-Sensing Behavior in Bacteria," <u>Annu. Rev. Microbiol.</u> 53:103-128 (1999)

EXAMINER	DATE CONSIDERED
	1-28-03
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